



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,081	06/25/2001	Hisaki Miyamoto	P20981	8591
7055	7590	07/30/2003		
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER MAKI, STEVEN D	
			ART UNIT 1733	PAPER NUMBER

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/887,081	MIYAMOTO ET AL.	
	Examiner Steven D. Maki	Art Unit 1733	
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i>			
Period for Reply			
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.			
<ul style="list-style-type: none"> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). 			
Status			
1) <input type="checkbox"/> Responsive to communication(s) filed on ____ .			
2a) <input type="checkbox"/> This action is FINAL. 2b) <input checked="" type="checkbox"/> This action is non-final.			
3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
Disposition of Claims			
4) <input checked="" type="checkbox"/> Claim(s) <u>1-20</u> is/are pending in the application.			
4a) Of the above claim(s) ____ is/are withdrawn from consideration.			
5) <input type="checkbox"/> Claim(s) ____ is/are allowed.			
6) <input checked="" type="checkbox"/> Claim(s) <u>1-20</u> is/are rejected.			
7) <input type="checkbox"/> Claim(s) ____ is/are objected to.			
8) <input type="checkbox"/> Claim(s) ____ are subject to restriction and/or election requirement.			
Application Papers			
9) <input type="checkbox"/> The specification is objected to by the Examiner.			
10) <input type="checkbox"/> The drawing(s) filed on ____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).			
11) <input type="checkbox"/> The proposed drawing correction filed on ____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action.			
12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.			
Priority under 35 U.S.C. §§ 119 and 120			
13) <input checked="" type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) <input checked="" type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of: 1. <input type="checkbox"/> Certified copies of the priority documents have been received. 2. <input checked="" type="checkbox"/> Certified copies of the priority documents have been received in Application No. <u>09/147140</u> . 3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.			
14) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.			
15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.			
Attachment(s)			
1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)		4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .	
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)	
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> .		6) <input type="checkbox"/> Other: _____	

1) Figures 11-20 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Figures 11-20 are admitted prior art in view of the following:

- (1) Figures 11-20 are described in the "BACKGROUND TECHNOLOGY";
- (2) after describing figures 11-20, applicant refers to "the above-described deficiencies of conventional optical disc lamination methods" (spec page 13);
- (3) in "BRIEF DESCRIPTION OF THE DRAWINGS", applicant states "Fig. 20 is a flow chart showing a conventional optical disc laminating method based on a spin coating technique" (spec pages 16-17); and
- (4) with respect to figure 12, applicant states "Description of the printing method and apparatus is omitted because these are known to public" (spec page 44).

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 14, the scope of the claimed apparatus is unclear since the preamble describes "laminated optical disc manufacturing apparatus" whereas the body of the claim fails to describe a "laminating means". As a related matter, it is unclear which device / means results in "forming an adhesive layer having a specific thickness between the first substrate and a second

Art Unit: 1733

substrate superimposed onto the first substrate". If the forming of an adhesive between the substrates is performed by the adhesive applying device instead of a laminating means / superimposing device, then do claims 1 and 14 require injection of the adhesive between the substrates so as to form the adhesive between the substrates and thereby exclude the process outlined in figure 2 of applicant's disclosure? In short, do claims 1 and 14 require a superimposing device? If not, why not?

As to claim 4, it is unclear what additional limitation of the apparatus is being claimed.

As to claim 5, it is unclear what additional limitation of the apparatus is being claimed.

In claim 7, it is unclear how "wherein the second substrate is superimposed onto the first substrate by contacting the top edge of the annular mound with the second substrate" affects the scope of the claim. Is a superimposing device required? If not, why not?

As to claim 13, it is unclear if the provisional bonding device of claim 9 and the warping prevention device of claim 13, which also provisionally bonds, are the same device or different devices.

In claim 15, it is unclear if the forming step requires a superimposing step. If not, why not?

4) Claims 4 and 5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 4 and 5 fail to further limit apparatus claim 1 since claims 4 and 5 merely describe the product worked upon (the type of adhesive to be used) instead of an additional limitation of the apparatus.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) **Claims 1-5, 7, 14-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Komori et al (US 5227213), and admitted prior art (specification page 9 lines 3-8) or Japan '212 (JP 60-125212).**

Europe '178, directed to method and apparatus for making a laminated optical disc, discloses providing a first disc and a second disc, applying adhesive in a donut shape to the first disc, superimposing the second disc on the first disc, rotating the discs to spread the adhesive and subjecting the adhesive to UV to cure the adhesive. See figures 3A, 3B, 3C and 3D and description thereof. The adhesive is applied using a "adhesive applying device" which is schematically illustrated in figure 3A. The second disc is superimposed on the first disc by a "superimposing means" (e.g. robot 41, transporter 45). See figure 4 and description thereof. Europe '178 does not recite an adhesive supply source supplying the adhesive at temperature T1 and a defoaming device.

As to claims 1 and 15, it would have been obvious to use an adhesive supply source to supply the adhesive at the claimed first temperature T1 to the adhesive applying device of Europe '178 since (a) Europe '178 teaches applying a UV curable adhesive to the disc using the

adhesive applying means and (b) Komori et al, also directed to making a laminated optical disc, suggests heating a UV curable hot melt adhesive to a temperature T of 80-160 °C so that the adhesive has a suitable viscosity for application to the disc. Furthermore, it would have been obvious to use a defoaming device to defoam the adhesive at the claimed second temperature T2 in view of either the admitted prior art's teaching to defoam UV curable adhesive using a defoaming tank during the manufacture of a laminated optical disc or Japan '212's suggestion to defoam UV resin for use in optical disc apparatus using a tank. The limitation of T2 > T1 would have been obvious and could have been determined without undue experimentation in view of the combined teachings of the above noted applied prior art to heat the adhesive so that it can be applied at a suitable viscosity and to defoam the adhesive - only the expected results (depositing of a defoamed adhesive ready for subsequent spreading across the disc) being obtained.

As to claims 2-3, 14, 16 and 18, it would have been obvious to use an adhesive recovery tank and filter as claimed in view of the admitted prior art's teaching to recycle the adhesive using an adhesive recovery tank and to filter the adhesive using a filter.

As to claims 4 and 5, note Europe '178's teaching to apply the adhesive using an adhesive applying means as shown in figure 3A. Europe '178 teaches that the adhesive is UV curable. In any event: As to claim 5, it would have been obvious to adapt the apparatus to apply a thermoplastic adhesive in view of Europe '178's teaching to apply a UV curable adhesive to form a laminated optical disc and Komori et al's teaching to use a hot melt (thermoplastic) UV curable adhesive to form a laminated optical disc.

As to claim 7, the limitation of spreading the claimed annular mound of adhesive would have been obvious in view of Europe '178's teaching to spread a donut of adhesive.

7) **Claims 2-3, 14, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Komori et al (US 5227213) and admitted prior art (specification page 9 lines 3-8) or Japan '212 (JP 60-125212) as applied above and further in view of Achilles et al (US 5518569) and Anderson (US 4850425).**

As to claims 2-3, 14, 16 and 18, it would have been obvious to use an adhesive recovery tank and filter as claimed since it is well known in the bonding art to recycle adhesive as evidenced by Achilles et al in order to reduce waste and to filter adhesive using a filter as evidenced by Anderson in order to remove contaminant(s).

8) **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Komori et al (US 5227213) and admitted prior art (specification page 9 lines 3-8) or Japan '212 (JP 60-125212) as applied above and further in view of Achilles et al (US 5518569).**

As to claim 14, it would have been obvious to use an adhesive recovery tank as claimed since it is well known in the bonding art to recycle adhesive as evidenced by Achilles et al in order to reduce waste.

9) **Claims 7, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Komori et al (US 5227213), and admitted prior art (specification page 9 lines 3-8) or Japan '212 (JP 60-125212) as applied above and further in view of Japan '713 (JP 5-20713) and Japan '786 (JP 8-36786).**

As to claim 7, the limitation of spreading the claimed annular mound of adhesive would have been obvious as noted above in view of Europe '178's teaching to spread a donut of

adhesive. This conclusion is optionally further supported by Japan '786's teaching to spread an annular mound of adhesive as shown in figures 1-2.

As to claims 7, 8 and 12, it would have been obvious to one of ordinary skill in the art to suction the adhesive between the discs with a predetermined suction force in the method / apparatus of making a laminated optical disc of Europe '178 since it is well known to apply suction to adhesive between discs during manufacture of a laminated optical disc in order to decrease bubbles as evidenced by Japan '713 and Japan '786. Japan '713 applies suction during rotating of the discs using a suction device as shown in figure 4 to decrease bubbles. Japan '786 applies suction as indicated in figures 1 or 2 to eliminate bubbles.

10) **Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Komori et al (US 5227213), and admitted prior art (specification page 9 lines 3-8) or Japan '212 (JP 60-125212) and further in view of Japan '713 (JP 5-20713) and Japan '786 (JP 8-36786) as applied above and further in view of Japan '630 (JP 4-139630).**

As to claims 9 and 13, it would have been obvious to provide Europe '178's optical disc laminating method / apparatus, which has a bonding device (UV source), with the claimed provisional bonding device / warping prevention device since Japan '630, also directed to making a laminated optical disc, suggests tentatively fixing discs before final bonding by applying UV through transparent parts 5b of the device indicated in figure 1(3) to prevent generation of focusing and tracking defect.

11) **Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Komori et al (US 5227213), and admitted prior art**

Art Unit: 1733

(specification page 9 lines 3-8) or Japan '212 (JP 60-125212) and further in view of Japan '713 (JP 5-20713), Japan '786 (JP 8-36786) and Japan '630 (JP 4-139630) as applied above and further in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242).

As to claims 10 and 11, it would have been obvious to one of ordinary skill in the art to center the discs using the claimed centering cylinder with at least two pins in view of Japan '234 and Japan '242's suggestion to using centering means comprising movable "pins" to accurately align discs to be laminated to form a laminated optical disc.

12) Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '178 (EP 706178) in view of Komori et al (US 5227213), and admitted prior art (specification page 9 lines 3-8) or Japan '212 (JP 60-125212) as applied above and further in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242).

As to claims 19 and 20, it would have been obvious to one of ordinary skill in the art to center the discs using the claimed centering cylinder with at least two pins in view of Japan '234 and Japan '242's suggestion to using centering means comprising movable "pins" to accurately align discs to be laminated to form a laminated optical disc.

obvious type double patenting

13) In parent application, a restriction was made between A (Group I), B (Group II), C (Group III), and D (Group IV) and applicant had elected A (Group 1). Claim 1 of this application is directed to B (Group II). However: No restriction was made between BA and AB. No restriction was made between BC and CB. No restriction was made between BD and DB.

14) The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

Art Unit: 1733

Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15) Claim 6 and 17 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5 and 16 of U.S. Patent No. 6309485.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 6 and 17 of this application fail to exclude the superimposing device and superimposing step required by claims 5 and 16 of US 6309485 respectively.

16) Claims 8 and 12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-13 of copending Application No. 09/887082 in view of Japan '713 (JP 5-20713). As to claims 8 and 12 of this application, it would have been obvious to provide the apparatus of claims 11-13 of copending 09/887082 with the claimed spreading device in view of Japan '713's suggestion to spread an annular mound of adhesive.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

17) Claims 9 and 13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-13 of copending Application No. 09/887082 in view of Japan '713 (JP 5-20713) as applied above and further in view of Japan '630 (JP 4-139630). As to claims 9 and 13 of this application, it would have

Art Unit: 1733

been obvious to provide the apparatus of claims 11-13 of copending 09/887082 with the claimed provisional bonding device / warping prevention device since Japan '630, also directed to making a laminated optical disc, suggests tentatively fixing discs before final bonding by applying UV through transparent parts 5b of the device indicated in figure 1(3) to prevent generation of focusing and tracking defect.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

18) **Claims 10 and 11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-13 of copending Application No. 09/887082 in view of Japan '713 (JP 5-20713) and Japan '630 (JP 4-139630) as applied above and further in view of Japan '234 (JP 4-57234) and Japan '242 (JP 61-292242).**

As to claims 10 and 11, it would have been obvious to one of ordinary skill in the art to center the discs using the claimed centering cylinder with at least two pins in view of Japan '234 and Japan '242's suggestion to using centering means comprising movable "pins" to accurately align discs to be laminated to form a laminated optical disc.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

19) **Claims 10-11 and 19-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-11 of copending Application No. 09/887083 in view of Japan '713 (JP 5-20713).**

Art Unit: 1733

apparatus of copending 09/887083 is for making a laminated optical disc and (2) Japan '713 expressly suggests using a similar apparatus in a method of making a laminated optical disc.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

20) **Claims 6 and 17 would be allowable if (1) rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims and (2) the obvious type double patenting rejection is overcome with a proper terminal disclaimer.**

Remarks

- 21) The remaining references are of interest.
- 22) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1733

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
July 27, 2003


STEVEN D. MAKI 7-27-03
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733